

OBSERVATIONS AND COMMENTS ON BIRD CASUALTIES AT MALSHEJ GHAT HOLIDAY CAMP, MAHARASHTRA¹

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(With two text-figures)

The MTDC resthouse at Malshej Ghat is situated at Ghatmatha (top of the ghats), above a deep funnel shaped valley towards the west, at an altitude of about 750 m. It is located in Murbad taluka of Thane district. Lying on the Deccan plateau of the Sahyadri mountain range, the Ahmednagar and Pune districts are adjacent to it, also on the plateau the ghat region and the valley are well clothed with moist deciduous forests. The enormous plateau, however, is fairly barren with patches of scrub forest. Harishchandragadh fort (alt. 1450 m) is located to the north of this plateau, rising about 700 m higher than the plateau.

A BNHS nature-camp was organised to this area on 23-24 June, 1984. The SW monsoon had only recently set and while driving through the ghat on 23rd June morning, we could see that a thick mist enveloped the top of the ghat. By about 10.00 hrs when we reached the top, the mist had suddenly cleared and there was sun light. There was an extremely strong westerly wind, blowing at a velocity which we estimated to be about 80 km/hr. The average temperature was 25°C and relative humidity about 70-80%. When we went to the edge of

the plateau to have a look at the deep valley, we realised that not only did these strong winds make walking difficult, but also observing through binoculars was not easy.

The resthouse staff informed that such strong winds are characteristic of this area at this time of the year. It is the massive wall of the Harishchandragadh mountain in the north which is the major barrier to the SW winds. These winds thus get channelled at an incredible velocity through the forested valley and are driven upwards, chilly and biting towards the plateau.

Less than ten minutes after having reached here, a Little Brown Dove (*Streptopelia senegalensis*) was caught, its forehead badly injured. Within a few minutes of this, a dead bird of the same species was located. Its forehead was injured too and the neck was broken. Within another half hour we spotted a Chestnut Bittern (*Ixobrychus cinnamomeus*), crouching on the rocks. On picking it up we found that its left leg was broken and hanging loose.

A short while later we were standing over the funnel where the winds gushed at their fastest. We observed a Whitebacked Vulture (*Gyps bengalensis*) taking-off from the cliff-edge on our approach. So strong was the wind that the bird could not properly orient itself and almost turned turtle as it rose. On reaching a good height it regained some control and

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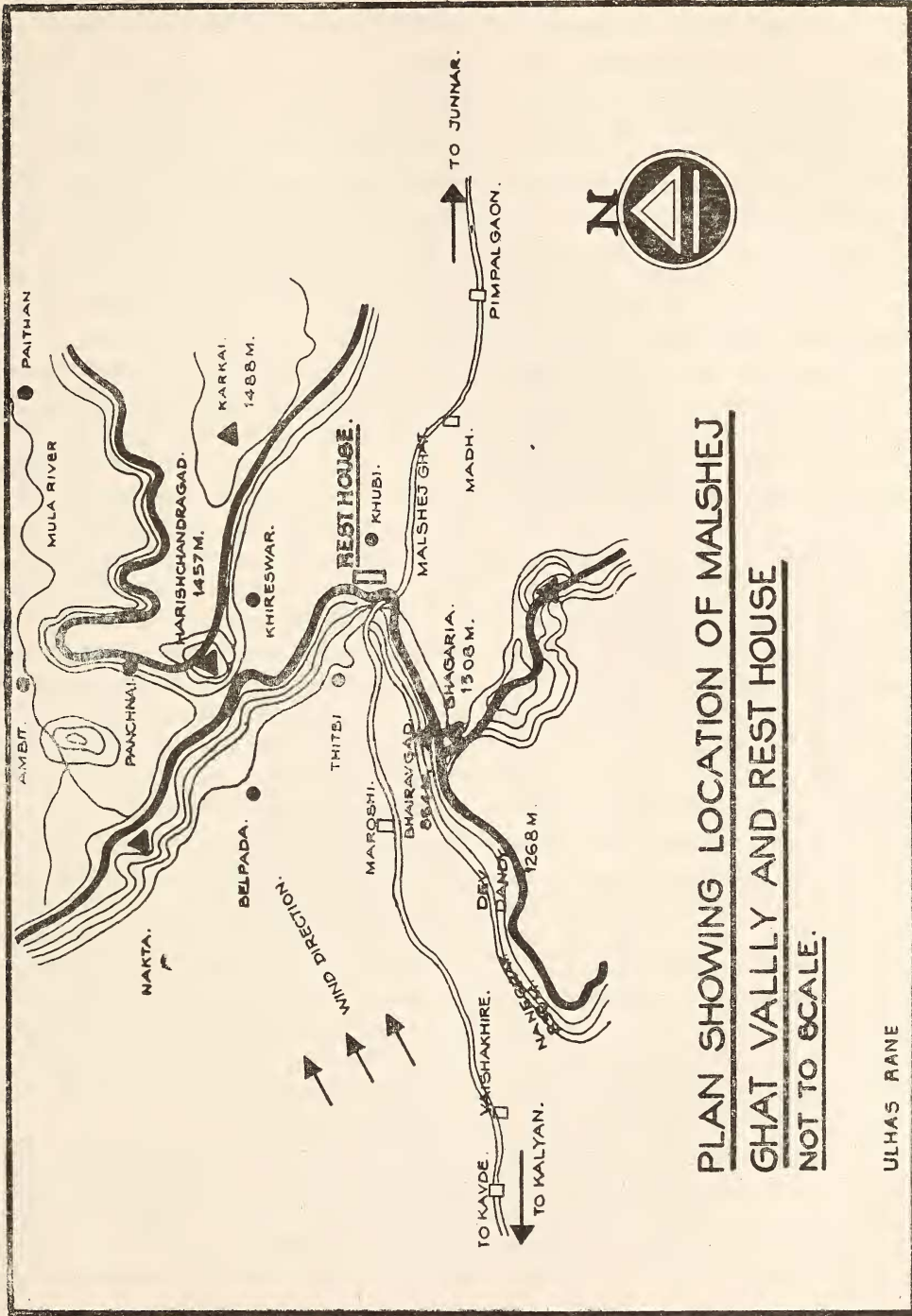


Fig. 1.

was carried by the wind in a north-easterly direction, towards Harishchandragadh. Some time later, it was seen soaring along with another vulture. Flocks of Cattle Egret (*Bubulcus ibis*) also could not control themselves well in flight, being carried sideways by the strong wind for considerable distances.

The happenings in our first hour-and-half around the resthouse at Malshej ghat greatly aroused our curiosity and we decided to carefully look around the entire area.

By 1900 hrs that evening we had located twenty-two more dead birds of nine species, in addition to above-mentioned Little Brown Dove and Chestnut Bittern. Some of these were found at a considerable distance from the resthouse.

The area continued to be lashed by very strong winds, such as we had been experiencing throughout the day. A thick mist now rapidly covered the entire area and by 1945 hrs visibility had been reduced to just a few metres. The weather and the visibility continued to deteriorate. We had all given up hopes of a good night drive when at 2055 hrs a male Rain Quail (*Coturnix coromandelica*) was seen banging on the big glass window to the left of the main entrance on the eastern face of the resthouse. The bird would flutter up along the glasspane hitting frantically with its beak and forehead. Soon it was exhausted and in our hands. A few minutes later a Yellowlegged Button Quail (*Turnix tanki*) female was caught while hitting the same window and at 2115 hrs a Green Pigeon (*Treron phoenicoptera*) was caught on the same side. By 2145 hrs we had hold of nine birds. Eight of these were caught on the eastern face of the resthouse and one on the western side. One of the Little Brown Doves was actually caught when it hit the porch-light on the ceiling on the eastern side.

Two females of the Yellowlegged Button Quail and the male of the Rain Quail died within an hour of being caught. Of the remaining six live birds, we put colour rings on two Little Brown Doves, a Green Pigeon and a Button Quail male. These birds were then released at about 2240 hrs, almost 200 m south of the resthouse. We took this step primarily to find out if the birds would orient themselves back to the resthouse in the thick mist and so late at night.

At 2250 hrs we went for what turned out to be an unsuccessful drive in the jeep, the powerful searchlights specially fitted on the top hardly able to penetrate the dense mist. On returning we got hold of all available torches and went for another walk around the resthouse. On the western side we flushed two quail (spp?) and one egret-like bird at 2335 hrs. At this juncture we decided to settle in for the night rather than have some more dead birds due to our flushing them. Some other members flushed several other birds around the resthouse. A lot of birds certainly appeared to roost in the immediate vicinity of the resthouse, and all flushed birds flew in the direction of the lights and the resthouse which could however be seen only very faintly.

The whole of the night of 23rd June continued to be thickly mist-laden and it was no different the next morning at 0610hrs, except for the accompanying light drizzle. By 0800hrs that morning we had further located nine dead birds and these included a Common Quail (*Coturnix coturnix*) and a Drongo Cuckoo (*Surniculus lugubris*).

For the next few hours the mist did not clear and there was intermittent rain. We located several severed heads of Watercock (*Gallicrex cinerea*) and also two dead Fruit Bats (*Pteropus* spp?), one of which had a

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severe head injury. By 1130 hrs the mist was lifting and a very strong wind had once again commenced. Another search in the neighbourhood of the resthouse resulted in six more dead birds. Three of these were found in small cisterns nearby, all on the eastern side.

This brought our overall tally of dead birds found during the past twentyfour hours to thirty-nine. Of the nine we had caught late in the evening of 23rd June, three had died and another Chestnut Bittern was seen (UR & others) smashing on to the rocks and getting killed, thus bringing the total death-count to forty-three. Fourteen species of birds were encountered (See notes on birds).

On the afternoon of 24th June we flushed some Yellowlegged Button Quail west and NW of the resthouse. On flying with the wind (towards east) the birds could not control themselves and one of them actually banged head-on into the wall of the resthouse while another almost did so. The bird which banged into the wall on dropping to the ground looked somewhat dazed, but as one of us approached to catch it, it flew off haphazardly, almost smashing into another wall on the way.

We may also mention here that Dr. Meena Haribal and some other BNHS members who visited this area between 1900 hrs on 7th July and 0800 hrs the next morning encountered over thirty birds of fifteen species within and around the resthouse premises. Dr. Haribal felt convinced that these birds most of which were alive and in a badly battered and exhausted condition, had come into the resthouse for refuge from the bad weather. Almost all of these birds were perched in the vicinity of lights in the verandah, porch and outside the resthouse. Besides the fourteen species we found, five additional species of birds were also

seen (MH). Include in bird notes, following comments.

One of us (UR) visited this place again on 9th July from 1030-1530 hrs. Though monsoon conditions prevailed, the wind was not very strong. One Little brown dove and two Whitebreasted waterhens were found dead. Inquiries with the resthouse manager revealed that large number of deaths occurred during the first week of monsoon only and the staff also informed that this phenomenon has been observed only since the beginning of this monsoon. Though the number of casualties had considerably reduced after the first week, many birds continued to come into and around the newly-constructed building for shelter from the harsh weather late in the evening. Twenty five quails (of several species) and seven Whitebreasted waterhens (all alive) were reportedly caught within the building premises and sent to Pune in the first week of July. Many sheltering birds are also kept as pets or sold to villagers.

COMMENTS

At this time of the year, when the SW monsoon settles in, Malshej Ghat and the surrounding plateau experiences weather characterised by very high velocity winds and heavy mist and fog (locals pers. comm.).

We found that strong winds take a appreciable toll of birds. The fact that we saw Whitebacked vultures and Cattle egrets unable to fly easily in such weather clearly explains that even strong fliers cannot maintain control while flying in such conditions. Most of the bird species which we encountered and which formed a majority on the casualty-list, are weak-fliers and it is therefore understandable that these are much more susceptible to strong winds.

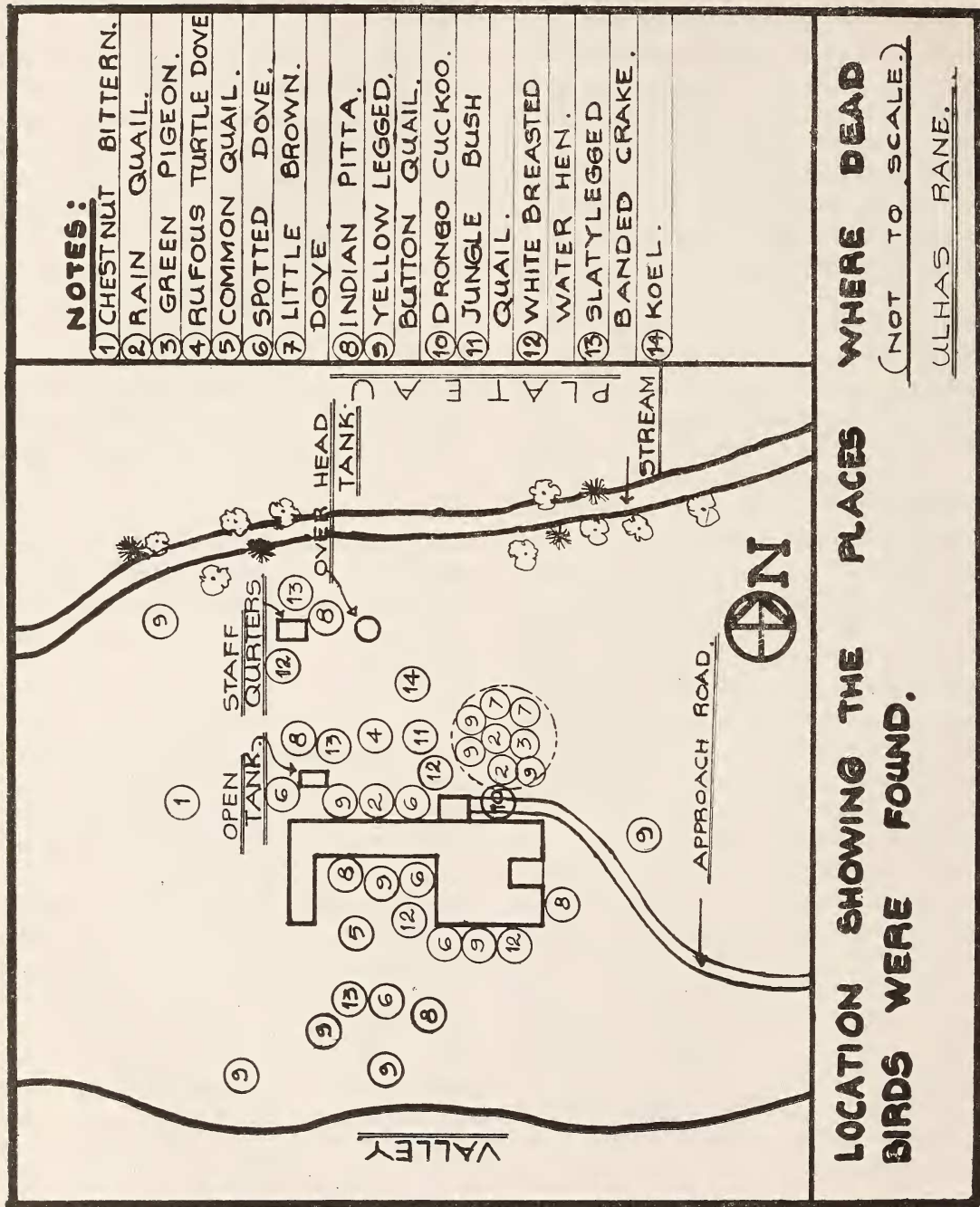


Fig. 2.

We feel safe to hazard a guess that most birds did not appear to die at first impact. In fact, as we observed during late-evening, the birds bang continuously, fluttering along the windows, hitting their beak and forehead frantically on the glass. Once exhausted, and probably also badly injured, they remain crouched within or around the building and meet their end. During the night of 7th July, Dr. Haribal and others saw in their torchlights, over thirty exhausted and injured and battered birds within the building premises.

While we did find dead birds all around the resthouse during the day (and it is highly probable that many of these were injured during night), eight of the birds were caught during the night (2055-2145 hrs on 23rd June) on the eastern face of the building (these appeared to have come in from the direction opposite to that of the wind flow). But it is important to note here that there was hardly any wind during this period of the evening which however, was characterised by very thick mist, visibility being reduced to hardly four metres.

Very bad weather appears to be highly damaging to birds and it seems that most birds come towards the resthouse as a refuge from the adverse weather. On particularly misty nights the number of birds coming in seems to be high, and there is no doubt that such bad weather is one of the most important factors in this phenomenon. But it is all the more suprising that 'if on thickly mist-clogged nights the birds come into the building and around it for refuge', then how do they spot the resthouse building or the lights in the very thick mist where we checked that visibility to normal human eye was hardly a few metres? On such nights, do many more birds crash into the building walls and lights

more by accident, thereby resulting in higher casualties on such nights? Moreover, while birdwatching in the forest and on the plateau we came across only three of the nineteen species of birds that had had accidents here.

This resthouse is the only lighted spot for a considerable distance around here. According to the staff, the birds are attracted by insects which prefer to remain around the various lights during late evening and nights. Thus coming for the insects, the birds smash themselves on the fixed glass windows through which they actually see the insects flying around the lights. But we found this a highly unconvincing explanation. Most of the (almost all) birds we found are strictly diurnal which at this time of the evening/night should be roosting. So how are these birds attracted by insects at the lights? The only crepuscular bird, Chestnut Bittern (*I. cinnamomeus*) was seen smashed to the ground in broad daylight. A nightjar (*Caprimulgus* spp?), badly exhausted and tattered was seen on 7th July night (MH). It was also observed that most of these birds are not insectivorous and this further rules out the possibility of their being attracted by insects at lights.

It seems highly probable that the bad weather conditions (heavy mist, strong winds and cold) and the new light sources would together be responsible for this phenomenon. If the birds are attracted solely by the lights and hence they bang themselves to death on the building walls (as reported for Lunglei by K. R. Rao and R. Zoramthanga (1976, *JBNHS* 75(3): 927-28), then casualties should have been reported by the staff before the monsoon's outbreak. The staff of the resthouse convinced us that birds came only after the SW monsoon had set in. But most of the birds caught on 23rd June night were at windows

through which the lighted interior was visible and one of the Little Brown Doves was actually caught after it had hit the ceiling light in the porch. Also, most of the exhausted and injured birds seen during the night of 7th July were in the vicinity of lights (MH).

It would be interesting to ascertain if having curtains on these windows would in any way result in a reduction in the number of casualties.

A majority of the birds caught during the night (23rd June) were on the eastern/South-eastern side of the building. A good number of exhausted and injured birds were seen in the vicinity of lights on this side on 7th July night (MH). From this one can infer that most of these birds had come from the surrounding forests and plateau on the east and southeast. Birds may have also come from the area between the resthouse building and the valley, but it is doubtful if some had come from the valley itself. For not only is the valley too deep but also the wall face of the valley is very steep and if at all birds are lifted by the strong winds most of these would bang on the valley walls and are unlikely to be lifted almost a thousand feet up, to the plateau. Moreover, the valley did not appear to have the misty and overcast weather conditions of the plateau. It was also observed that most of the birds we caught or found dead prefer a habitat typical of the plateau on the east and some were undoubtedly from the forest which is well represented on the southeast, and also in the valley.

K. R. Rao and R. Zoramthanga, writing on "The phenomenon of nocturnal flights of some resident birds at Lunglei, Mizoram, NE India" (1972, *JBNHS* 75(3): 927-28) report more or less similar observations on bird casualties (occurring annually) by dashing to death

against the walls of a building. They report that,

- a) Birds dash against the building in late September and early October when the area receives late monsoon rains,
- b) the phenomenon occurs when the sky remains overcast without clouds — i.e., without moonlight and with fog and mist. A little drizzle appears favourable,
- c) the birds usually fly from west to east, during 7-10 p.m.

They further write "the building, at 1210 m amidst rugged mountain ridges has three prominent lights on the same plane in front of the building and being of high intensity, the lights are seen at night even from far-off distances. The birds are attracted by the lights and dash themselves headlong against roofs and walls and thus get killed."

Our observations are more or less similar to those of Rao & Zoramthanga (1976) and Sálím Ali (1962, The BNHS/WHO Bird Migration Study Project, *JBNHS* 59(1): 128-130), except that these were in late September-early October and Sálím Ali (1962) reports for Haflong that the birds came in from the north.

Some of our observations and findings bear striking resemblance to those of Rao & Zoramthanga (1976) and Sálím Ali (1962).

- i) *Almost all species are resident birds:*
Same holds true for the Malshej Ghat phenomenon also. Almost all species that we and the subsequent party encountered in the accidents are resident, except perhaps Drongo Cuckoo (*Surniculus lugubris*), Common Quail (*C. coturnix*), Rain Quail (*C. coromandelica*) and Indian Pitta (*Pitta brachyura*). These birds are either considered migrant, passage or breeding for Maharashtra state (Huma-

yun Abdulali — Checklist of Birds of Maharashtra, 1981).

ii) *Green Pigeons (Treron spp.) attracted to the light in considerable numbers:* We encountered *T. phoenicoptera* banging on the door during late evening on 23rd June. The resthouse staff informed us that they had come across this bird on several earlier occasions in the season, while Dr. Haribal also came across an exhausted and injured bird of this species on the night of 7th July.

iii) *Almost all species are diurnal (Sálim Ali, 1962)*
 Except for the Chestnut Bittern (crepuscular) and a Nightjar (*Caprimulgus* spp?) all other species encountered are strictly diurnal.

Very few birds were observed when actually birdwatching on the scrub-covered plateau stretching on the east and northeast. It is noticeable that very few of these were among those found dead or caught during the night.

The birds we saw were:

- Cattle egret (*Bubulcus ibis*), in flocks
- Common Bee-eaters (*Merops orientalis*), in small parties. Juveniles birds also seen.
- Greyheaded Mynas (*Sturnus malabaricus*), in small parties
- Brahminy Mynas (*Sturnus pagodarum*), in small parties
- Whitebreasted Waterhen (*Amaurornis phoenicurus*)
- Jungle Babbler (*Turdoides striatus somervillei*), two small parties, noisy
- Redvented Bulbul (*Pycnonotus cafer*), only twice seen
- Pond Heron (*Ardeola grayii*), two birds seen
- Whitenecked Stork (*Ciconia episcopus*)
- Little Egret (*Egretta garzetta*)
- Lark (spp?), Whitebacked Munia (*Lonchura*

striata), a pair.

In the forested hill towards the south and southeast we observed the following birds: Whistling Thrush (*Myiophonus horsfieldii*) Iora (*Aegithina tiphia*) Spotted Babbler (*Pellorneum ruficeps*) Redwhiskered Bulbul (*Pycnonotus jocosus*) Kestrel (*Falco tinnunculus*) Red Spurfowl (*Galloperdix spadicea*), heard only

Alpine Swift (*Apus melba*), Purplerumped Sunbird (*Nectarinia zeylonica*) Whitethroated Ground Thrush (*Zoothera citrina*), Blackwinged Kite (*Elanus caeruleus*), Indian Robin (*Saxicoloides fulicata*), Pied Bushchat (*S. caprata burmanica*)

Following are notes on birds which we found dead or caught during the night. Also included are Meena Haribal's observations.

1. YELLOWLEGGED BUTTON QUAILS

(*Turnix tanki*)

Maximum number of birds found dead and/or caught were of this species. When flushed during the day, these birds on flying towards east (in wind direction) crashed head-on into resthouse wall. Females commoner than males. Five of this species found injured on 7th July night around the building (MH).

2. JUNGLE BUSH QUAIL

(*Perdicula asiatica*)

One dead male found on 23rd June afternoon. One dead and four exhausted birds of this species within and around the building on 7th July night (MH). No sighting of any during the day.

3. COMMON QUAIL

(*Coturnix coturnix*)

One dead male found on 24th June morning. This bird is considered a winter migrant to

Maharashtra state (Humayun Abdulali, Checklist of the Birds of Maharashtra, 1981) and the present finding of a male at this time of the year happens to be the only record of this bird for the month of June. By about mid-March most birds are supposed to have departed.

4. RAIN OR BLACKBREASTED QUAIL
(*Coturnix coromandelica*)

One male was caught at 2055 hrs on 23rd June. The next morning we found two dead females, evidently having died sometime during the night. The male died within an hour of being caught. Later in the BNHS it was found to have enlarged testis, thus indicating that it was in breeding condition. This happens to be the only record of a male *C. coromandelica* in breeding condition found in the neighbourhood of Bombay. The bird is considered a migrant by Humayun Abdulali (Checklist 1981). The two females are also in the BNHS collection presently.

5. RUFIOUS TURTLE DOVE
(*Streptopelia orientalis*)

One was found dead on 23rd June.

6. SPOTTED DOVE
(*S. chinensis*)

Five dead birds found. Several of these birds, in an exhausted and battered condition were seen in the resthouse premises during the night of 7th July (MH). Not one bird was seen while birdwatching either on the plateau or in forest.

7. LITTLE BROWN DOVE
(*S. senegalensis*)

Two found dead and two were caught on the evening of 23rd June. None seen while birdwatching on the plateau or in the forest, and none were seen on 7-8 July (MH) either.

One of these birds was caught on 23rd evening after it actually hit a ceiling light in the porch. One dead seen on 9th July (UR).

8. RED-TURTLE DOVE
(*S. tranquebarica*)

Two seen within resthouse premises on 7th July night (MH). One of these was badly injured and was caught.

9. GREEN PIGEON
(*Treron phoenicoptera*)

One was caught on 23rd June. According to resthouse staff they came across this pigeon on several occasions during this monsoon. One exhausted and injured bird of this species seen during night of 7th July (MH). Green pigeons (*Treron* spp.) have been reported by Rao & Zoramthanga (1976) and Salim Ali (1962).

10. INDIAN PITTA
(*Pitta brachyura*)

Six dead located in immediate vicinity of building, on 23rd and 24th June. During the night of 7th July, five injured and exhausted birds were seen sheltering in and around the building (MH). *P. brachyura* is considered a passage migrant.

11. WHITEBREASTED WATERHEN
(*Amaurornis phoenicurus*)

We located four dead waterhens on 23rd and 24th June. Several seen around water-covered localities on the plateau. One found dead near kitchen on 7th July night (MH). Two dead seen on 9th July (UR). Seven of these birds were reportedly caught and taken to Pune in the first week of July (Resthouse staff pers. comm.).

12. SLATY LEGGED BANDED CRAKE
(*Rallina eurizonoides*)

On 23-24 June four dead birds were located around the resthouse. One of these was in a

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cistern. A male that was taken to the BNHS had enlarged testis. None seen or heard while birdwatching on the plateau or in forest.

13. WATERCOCK

(*Gallixes cinerea*)

One dead female located. Several severed heads of this bird were also located.

14. KOEL

(*Eudynamis scolopacea*)

One dead male found near building on 23rd June. A dead female was found on 7th July (MH). We never saw or heard any koel.

15. DRONGO CUCKOO

(*Surniculus lugubris*)

One dead bird found on the morning of 24th June. The bird had undoubtedly died the previous night and was found below a light on the eastern side of the resthouse. None seen or heard. Neither did we see or hear any Drongo spp. An exhausted and injured *S. lugubris* (drongo-cuckoo) was seen on the night of 7th July (MH). This particular bird was a juvenile according to Dr. Haribal.

16. COMMON HAWK CUCKOO

(*Cuculus varius*)

One actually came and hit the torch Mr. Amonkar was holding at around 2230 hrs on 7th July, while looking out for birds that night. According to him, the bird was sitting on the building roof and appeared to have been attracted by the sudden flash of the torchlight.

17. NIGHTJAR

(*Caprimulgus* spp?)

One injured and tattered bird seen within resthouse premises late on the night of 7th July

(MH). Though there is habitat suitable for nightjars, we did not come across any.

18. THREETOED FOREST KINGFISHER

(*Ceyx erithacus*)

One bird was spotted late in the evening on 7th July sitting on the toilet window (MH). This bird later flew into the toilet and was caught. This species is presumed to be a breeding migrant to this area, coming at the onset of the monsoon and remaining here to breed.

19. POND HERON

(*Ardeola grayii*)

One seen immediately outside the resthouse on the night of 7th July (MH). Several seen when birdwatching on the plateau on 23rd and 24th June.

20. SNIPE

(*Capella* spp?)

A snipe was seen at a puddle behind the kitchen on the night of 7th July (MH). All *Capella* species are winter migrants to peninsular India and as such this happens to be a unusual sighting of a snipe.

Some of the birds that we encountered were collected and taken to the BNHS.

We recommend that this unusual phenomenon be further investigated and checked into, both during and after the monsoon.

ACKNOWLEDGEMENTS

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